**Geometry Test Review Unit 4 – Congruent Triangles Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Block\_\_\_\_**

True or False. Please write out the entire word.

**1**.\_\_\_\_\_\_\_\_\_\_ An isosceles triangle can have three congruent sides.

**2**.\_\_\_\_\_\_\_\_\_\_ An equilateral triangle is always equiangular.

**3**.\_\_\_\_\_\_\_\_\_\_ Angle – Side – Side is a shortcut that can be used to prove that two triangles are congruent.

**4**.\_\_\_\_\_\_\_\_\_\_ The two non-right angles of a right triangle are complementary.

**5**.\_\_\_\_\_\_\_\_\_\_ If ΔMPR ≅ ΔNSW, then ∠W ≅ ∠M.

**Fill in the blank with the correct letter using the word bank at the right.**

**Word Bank**

1. right
2. isosceles
3. obtuse
4. acute
5. equilateral
6. scalene
7. base
8. vertex
9. legs
10. hypotenuse
11. equiangular

*None of the answers will be repeated. Not all answers are used.*

\_\_\_\_\_**6.** The angle formed by the legs of an isosceles triangle is called the \_\_\_\_ angle.

\_\_\_\_\_**7**. All equiangular triangles are also \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

\_\_\_\_\_**8**. In an isosceles triangle, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_angles are congruent.

\_\_\_\_\_**9.** A triangle with angles 400, 800 and 600 is called a(n) \_\_\_\_\_\_\_\_\_\_triangle.

\_\_\_\_\_**10**. The side opposite the 900 angle in a right triangle is called the \_\_\_\_\_\_\_\_\_.

\_\_\_\_\_**11.** A triangle that has at least two equal sides is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

\_\_\_\_\_**12**. The sides opposite the acute angles in a right triangle are called \_\_\_\_\_\_\_\_\_.

\_\_\_\_\_**13.** If a triangle has angles that measure 500, 1000 and 300, then it is a(n) \_\_\_\_triangle.

\_\_\_\_\_**14.** If all three sides of a triangle have different lengths, then the triangle is \_\_\_\_\_\_.

\_\_\_\_\_**15.** A triangle with angles measuring 400, 900 and 500 is called a(n) \_\_\_\_\_\_\_\_triangle.

**Classify each triangle by its sides and angles. The answers appear in the word bank above.** (2 pts each)

114°

**16.** sides: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **17.** sides: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

angles: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ angles: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Given ΔABC ≅ ΔXYZ, fill in the correct angle, segment, or degree, or measure in problems 18 - 25.**

Z

Y

X

A

B

C

380

5 cm

9 cm

960

**18**. ∠A ≅ \_\_\_\_\_\_\_\_ **19**.  ≅ \_\_\_\_\_\_\_\_\_

**20**.  ≅ \_\_\_\_\_\_\_\_ **21**. ΔBAC ≅ \_\_\_\_\_\_\_\_

**22**. m∠X = \_\_\_\_\_\_\_\_ **23**. AC = \_\_\_\_\_\_\_\_\_

**24**. m∠C = \_\_\_\_\_\_\_\_ **25**. ΔZXY ≅ \_\_\_\_\_\_\_\_

**Find the value of each angle in the picture shown.** *Fill in the picture with your measures first*

1

36°

2

3 4 118°

5

6

70°

65°

82°

68°

**26**. m∠1 = \_\_\_\_\_\_\_\_ **27**. m∠2 = \_\_\_\_\_\_\_\_

**28**. m∠3 = \_\_\_\_\_\_\_\_ **29**. m∠4 = \_\_\_\_\_\_\_\_

**30**. m∠5 = \_\_\_\_\_\_\_\_ **31**. m∠6 = \_\_\_\_\_\_\_\_

**Find the value of x in each problem.**

**32.** x = \_\_\_\_\_\_\_ **33**. x = \_\_\_\_\_\_\_ **34**. x = \_\_\_\_\_\_\_

1320

750

x°

x 0

350

120 0

2x0

(x + 2)0

(5x – 14)0

**35**. x = \_\_\_\_\_\_\_ **36**. x = \_\_\_\_\_\_\_ **37**. x = \_\_\_\_\_\_\_

1200

2x 0

360

8x + 5

2x + 11

30

4x 0

50 0

70 0

**For problems 38 - 46, mark the picture (if applicable). Write why the triangles are congruent (SSS, SAS, ASA, AAS, or HL) in the blanks provided. If the triangles are not congruent, write NOT ≅.** *Your marks MUST be accurate and match your answers!*

**38**. \_\_\_\_\_\_\_\_\_\_ **39**. \_\_\_\_\_\_\_\_\_\_ **40.** \_\_\_\_\_\_\_\_\_\_

**41.** \_\_\_\_\_\_\_\_\_\_ **42**. \_\_\_\_\_\_\_\_\_\_ **43**. \_\_\_\_\_\_\_\_\_\_

D

A

B

O

C

Complete the proof with the correct reasons.

(Mark the given on the picture1)

44. Given: , 

Prove:

**Statements Reasons**

1. ,  1.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. ∠AOB ≅ ∠DOC 2.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. ΔABO ≅ ΔDCO. 3.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_